THE INSECT PEST SURVEY BULLETIN

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OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR APRIL, 1924

During the past month the Hessian fly situation remained about as during March throughout the West-Central and Upper Mississippi Valley States. Following the abnormally wet fall of 1923 a very serious and unusual Hessian fly development has taken place in northwestern Kansas, extending far west of the region where the Hessian fly is usually known as a pest.

Throughout that part of the region covered by the chinch bug extending from Illinois to Kansas, this insect seems to have passed the winter under unusually favorable conditions. The bugs were observed on the wing on April 16 in central Illinois, between the 10th and 15th in central Missouri, and by the 15th and 21st in southern Nebraska. Emergence in Kansas was observed as early as April 7.

A very serious greenbug outbreak was reported from southern Oklahoma during the third week of April.

Moths of the fall cankerworm are appearing in large numbers in central and southern New York State and Ohio.

The tent catcrpillar is very generally prevalent and apparently much more numerous than usual throughout the New England and Middle Atlantic States southward to Delaware.

The pear psylla began egg laying in southern New York on April 6 and heavy egg laying was reported in the northern tier of counties during the third week in the month.

The application of 500,000 pounds of paradichlorobenzene in the Georgia Peach Belt last fall appears to have been highly successful in controlling the peach borer. The plum curculio in this same region passed the winter in unusually good condition and will probably be more scrious than usual this year.

A very interesting outbreak of the cowpea curculio, as a post of citrus, is reported from Florida. These beetles eat the young shoots to such an extent that recently set trees are sometimes killed back one foot.

The Australian tomato weevil is reported for the first time from Mobile County, Alabama.

An aphid of a species not yet determined is reported as appearing on orange in great numbers in portions of southern Florida and doing important damage.

OUTSTANDING ENTONCLOGICAL FEATURES FOR CANADA, MAY 1,1924

Spring weather conditions have been somewhat variable throughout the Dominion of Canada, In British Columbia the season has been exceptionally early, the first cultivation of the soil being general in the scuthern interior sections of the Province by the middle of March. On the Canadian Prairies the season is well advanced. In Alberta there is an abundance of moisture in the soil due to unusual wet conditions. In Manitoba cultural operations were well under way by the first week of April but about fifteen inches of snow in the middle of the month brough operations to a standstill. In Eastern Canada the early spring temperatures have in general been above normal but snow was still quitte plentiful in protected places by the middle of April.

The cankerworm, Alsophila pometaria Harr. has been slowly increasing in Kings County, N. S., during the last four years, and it is probable that larvae will be numerous in the Annapolis Valley this spring. A heavy infestation is anticipated in southern Alberta during the coming season.

The apple red bug, Lygidea mendax Reut., has been increasing in numbers for some years in the Annapolis Valley, N. S., and if it has overwintered satisfactorily its depredations will likely be such as to necessitate control measures being undertaken in 1924.

The fall webmorm, although of no great economic importance at present, is on the increase all along the St. John River Valley, N. B. In 1923 it was common on alder and other shrubs and bushes along roadsides and line fences, as well as in orchards. This insect was likewise abundant throughout the Gatineau Valley near Ottawa during the autumn of 1923.

During late September and early October, 1923, the moths of the chain-dotted geometer, <u>Cingilia catenaria</u> Dru., occurred in enormous flights all over Nova Scotia, being noted as especially numerous at Aylesford Bog. As the larvae feed on cranberry as well as various trees and shrubs, an outbreak on the former may be expected during the coming summer.

The garden springtail, <u>Sminthurus hortensis</u> Fitch, was recorded in 1923 as injurious at Wimot and Truro, N. S., and large numbers were seen on spinach at East Lawrencetown, Halifax County, Nova Scotia, but no serious injury resulted at the last place. Early spring injuries from these insects are expected to occur again in 1924.

The cabbage maggot, was reported in 1923 for the first time in four years at Lethbridge, Alberta, indicating the possible ascendency of this insect as a pest.

Among the wirevorms of economic importance at Saskatoon, Saskatchewan, during 1923, the species <u>Ludius aereipennis</u> Kby. and <u>Cryptohyonus nocturnus</u> Esch. are the most important. They were found to be associated with cultivated fields rather than sod lands. It is anticipated that these pests will be troublesome in central and southern Saskatchewan this season. Wireworms and false wireworms are going to be our worst trouble in northern Alberta and in fact over most of the province during 1924.

The lilac leaf-miner <u>Gracilaria syringella</u> Fab., an important <u>European pest</u>, was found badly attacking lilacs in Ottawa City during the surmer of 1923. There appears to be no previous Canadian record of this pest.

CEREAL AND FORAGE-CROP INSECTS

WHEAT

HESSIAN FLY (Phytophage destructor Say)

- Illinois
- W. P. Flint: Examinations made during the past week in southern and central Illinois failed to show any emergence of the fly up to April 10.
- Missouri
- L. Haseman (April 25): Some interest is developing in the possible damage from the spring brood of the Hessian fly. Generally speaking, however, the fly situation except in restricted localities is less threatening in Missouri than a year ago.
- Nebraska
- M. H. Swenk (April 21): Regarding the Hessian fly in Nebraska, there is little to add to my rather full statement dated March 12, except that a subsequent personal survey of the area of heavy infestation in Furnas County reveals the fact that the heavy midsummer brood of 1923 that developed in the volunteer wheat still largely persists there in the puparium stage, and these puparia, together with those of the main fall brood in the early seeded winter wheat, will undoubtedly form a heavy spring brood of flies. Flies were already beginning to emerge in small numbers during the third week in April.

Kansas

J. W. McColloch (April 16): A trip through western Kansas last week indicated that, following the abnormally high rainfall of last fall, the Hessian fly is far above the average in abundance in the region in northwestern Kansas extending from Smith, Osborne, and Russell Counties westward to Thomas and Rawlins Counties. Another center of serious infestation seems to be located in the counties surrounding Riley County. At the time of this survey from 5 to 75 per cent of the grain was infested.

CHINCH BUG (Blissus leucopterus Say)

- Illinois
- W. P. Flint: The weather of April has been favorable to this insect. On April 16 some bugs were observed flying in the central Illinois counties. There has been no general movement out of winter quarters up to the present time, April 19.
- Missouri
- L. Haseman (April 23): In central Missouri scattering flights of chinch bugs were observed between the 10th and 15th of April. The chinch bug situation looks threatening in spite of severe winter, and farmers are preparing for another chinch bug combat.

Nebraska

M. H. Swenk (April 21): The chinch bug wintered successfully, according to our best information, along the southern boundary of the State, and by the third week in April was already appearing in large numbers in the wheat fields of Pawnee County, while farther west, in Furnas County, the bugs were just starting to leave the grass in numbers. Serious injury by the chinch bug is expected during the coming summer along the southern boundary of Nebraska.

Kansas

J. W. McColloch (April 16): Chinch bugs passed the winter with very little mortality. The numbers of bugs in bunch grass this winter was considerably larger than last year. Emergence from hibernation began on April 7.

GREENBUG (Toxoptera graminum Rond.)

Oklahoma

E. E. Scholl (April 19): We have received a report of a very serious greenbug infestation in the southern part of Payne County near Perkins, Oklahoma. The infestation has been verified this morning by County Agent C. H. Guernsey and Extension Agronomist G. C. Gibbons. I vill undertake control measures right away.

GREAT PLAINS FALSE WIREWORM (Eleodes opaca Say)

Kansas

J. W. McColloch (April 17): Worms are said to have ruined the stand on a quarter of a section at Missler, necessitating the plowing up of the crop.

CORM

LARGER CORN STALK-BORER (<u>Diatraea saccharalis</u> Fab. var. crambidoides Grote)

Texas

T. C. Barber (April 15): First infested corn that I have observed this season was discovered today, at Brownsville.

ARMYWORM (Cirphis unipuncta Haw.)

Mississippi

H. W. Allen (April 15): The armyvorm, at A. & M. College, present in moderate numbers; no appreciable damage noted. The overwintering brood has largely passed into the pupal stage without evidence of disease or parasites in sufficient abundance to hold the infestation in check.

AEFALFA

PEA APHID (Illinois pisi Kalt.)

Kansas

J. W. McColloch (April 17): An outbreak has developed in a small field at Manhattan. Other fields contain small numbers of aphids.

California

R. E. Campbell (April 8): The serious infestation reported last month in Los Angeles and San Bernardino Counties has been practically cleaned up by the aphid fungus Entomorhthora aphidis Hoffn, which was stimulated by recent rainy weather.

CLOVER

WISTERN TWELVE-SPORTED CUCUMBER-BEETLE (Diabrotica soror Lec.)

Oregon

Don C. Mote (April 4): This insect is still being reported as a damging pest of seedling clover, in the vicinity of Corvallis.

CLOVER-LEAF WEIVIL (Hypera punctata Fab.)

Mississippi

H. W. Allen (April 15): A moderate infectation on clovers at A. & M. Jollege, Damage negligible, due to the luxuriant growth of the host plants. Insect at present largely in pupal stage. Larval death rate in injectary material considerably less than 10 per cent.

CUTTORMS (Noctuidae)

Mississippi

H. W. Allen (April 15): In material consisting of well over a thousand specimens collected at A. & M. College this spring, two species, Feltia ducens Walk. or subgothica Haw. and Polia renigera, Steph. are the only species present in large numbers. These have been collected largely in clovers and rankly growing weeds. No entensive damage to croms has been noted. The first named species is largely in the last larval instar, while renigera is now passing rapidly into thepupal stage. Death by parasites or disease has been extremely low. (Determinations based on larvae examined by Mr. S. D. Crumb, U. S. Bureau of Entomology.)

VEIGH

A VETCH APHID (possibly Illinoia pisi Kalt.)

Oregon

Don C. Mote (April 9): Growers and agronomists report aphids more abundant at this time than usual. Damage will be severe at Corvallis and vicinity unless checked by weather conditions or natural enemies.

FRUIT INSECTS

APPLE

APHIDIDAE

Illinois

W. P. Flint: Aphid eggs have been hatching for some time in orchards in the southern end of the State, the sequence of the different species being that usually found, eggs of the apple-grain aphid hatching about one week before those of the rosy, or the green aphid. Up to the present time, examinations in central and southern Illinois orchard districts have shown but few of the green and rosy species present. The grain aphid is very abundant. In western Illinois, a slightly higher percentage of the green aphid has been found, but the numbers appearing in this section of the State are not great enough to cause expectation of serious injury. Syrphid fly larvae are present in large numbers.

Missouri

L. Haseman (April 23): The plant-lice began hatching the first week in April and some orchards showed heavy infestation. Where the lubricating-oil emulsions were applied late in scale-infested orchards, they gave excellent control of the young lice.

Utah

George F. Knowlton (April 4): Eggs of plant-lice are numerous on apple. Aphis poni DeG. and Rhopalosiphum prunifoliae Fitch are the common species in the northern part of this State, with the addition of Anuraphis roseus Baker farther south.

GREEN APRLE APHID (Aphis pomi DeG.)

Massachusetts

A. I. Bourne (April 24): On the 14th of April we noted a few green apple aphids hatching, but they did not begin to come out in numbers until about the 19th.

Connecticut

M. P. Zappe (April 25): At Milford the aphids average about 1 to a bud, The buds are just opening. The veather has been rather cool for the season and it has been very vindy.

APPLE-GRAIN APHID (Rhopalosiphum prunifoliae Fitch)

Maryland

E. N. Cory (April 7): This insect is in the egg-hatching stage at Hagerstown.

FRUIT-TREE LEAF-ROLLER (Archips argyrospila Walk.)

New York

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J. E. Connelly (April 12): In Ontario County egg masses of this insect are occasionally observed.

APPLE AND THORN SKELETONITER (Hemerophila pariana Clerch)

Connecticut

J. L. Rogers (April 10): Several adults were flying about a building in New Haven and resting on the windows.

TETT CATTRPILLAR (Malacosoma americana Fab.)

Massachusetts

A. I. Bourne (April 24): I have a report, relative to the hatching of tent caterpillars from northern Worcester County, that the first young were noted appearing on April 17. Here at Amherst, the first young were seen to be hatching on April 20 and 21. This is exactly the same date when the first larvae were noted a year ago.

Connecticut

M. P. Zappe (April 25): Caterpillars hatched a few days ago at Hamden and Milford. Webs can be seen ensily on trees beside roads. The larvae are feeding on opening buds. They appear to be more plentiful than last year. It has been cool for the season and rather windy.

New York

C. O. Wagoner (April 19): Tent caterbillars seem rather common at Ulster.

New Jersen

Ralph B. Lott (April 22): At this date tents of this caterpillar are very numerous on apple and wild cherry throughout the State. First egg masses to hatch were noted on april 5. At this date tents are about as large as a silver dollar and as many as 20 have been noted on a single tree.

Delaware

C. C. Houghton (April 11): Eggs of this species are just heginning to hetch at Nevark. This is two weeks later than the time of hatching for 1922. Egg masses are very numerous this year on apple, peach, and cherry in this vicinity and a heavy infestation is expected.

Oregon

Don C. Mote (april 9): At Corvallis eggs are hatching and larvae are building nests. The first molt has not yet occurred. Found one nest on a cherry tree. They are apparently not as abundant as in an average year. The season is advanced about one week.

SFRING CAPHERWORM (Paleacrita vernata Peck)

New York

W. T. M. Forbes (April 13 and 14): At Ithaca spring cankerworms are much rarer in trap than pometaria.

FALL CANKENCRU (Alsophila pometaria Harr.)

New York

W. T. M. Forbes (Morch 28): Moths are swarming in great abundance at Ithaca. The spring cankerwerm has not been seen. (April 13-14): Abundant in trap.

LIBRARY STATE PLANT BOARD

RED-FOOTED FIEA-BETTLE (Crepidodera erythropus Melish.)

Maryland

J. P. Eurdett (April 17): At La Plata the flea-beetles were very numerous on the tender foliage where they were riddling the leaves. The damage could be considered serious and would be the occasion of alarm to any fruit grower. Control: Two applications of Bordeaux mixture 4-5-50 plus 1½ pounds of arsenate of lead.

BUFFALO TREEHOPPER (Ceresa bubalus Fab.)

South Dakota

H. C. Severin (April 15): Trees which frequently contain many eggs of this pest are being sold from nurserymen to our farmers and orchardists. This has become serious enough for the State entomologist to feel compelled to take action to stop the practice of selling such stock in this State. The damage is especially severe on young stock.

SAN JOSE SCALE (Aspidiotus verniciosus Comst.)

New York

- J. E. Connelly (April 12): This pest is generally prevalent in Catario County. One orchard is budly infested at Geneva.
- C. C. Wagoner (April 12): The infestation by the San Jose scale is generally heavy on currants and gooseberries in Ulster County.

Missouri

L. Haseman (April 23): During the pact month very extensive dormant spraying for the control of the scale has been done. Under Missouri conditions the winter mortality was very high, and from experimental work with dormant sprays and from examinations of numerous commercial orchards receiving dormant sprays throughout the State, we find a very high percentage of control. We believe the crisis as regards recent difficulty in keeping the scale under control in Missouri has passed.

OYSTER-SHILL SCALE(Levidosavhes ulmi L.)

South Dakota

H. C. Severin (April 15): This scale is increasing in abundance throughout the eastern third of the State and the Black Hills. In some sections it is killing trees.

SOURFY SOALE (Chionaspis furfura Fitch)

New York

P. J. Chapman (April 5): At Red Hook two orchards are badly infested.

EUROFEAN RED SPIDER (Paratetranychus pilosus C. & F.)

Massachusetts

A. I. Bourne (April 24): In regard to the European red mite, I can say we have definite information as to its presence in Plymouth and Bristol Counties in considerable abundance, so that we now have definite information that the pest is distributed over practically the whole State, although thus far we have had no definite reports of its presence on the Cape. Although in orchards where it is proving very abundant it is being found in considerable numbers even on McIntoshes, which from our experience of the last year or so have not been particularly likely to be infested, the pest seems to center its attention on Baldwins, Here in the College orchard we are also noting it in considerable abundance on McIntoshes and Wealthies.

FRUIT-TREE LEAF SYNETA (Syneta albida Lec.)

Oregon

Don C. Mote (April 9): Syneta is reported as being on the increase, at Corvallis. On this date the beetles descended like raindrops when a limb was jarred. The week before only an occasional one was found.

PEAR.

PEAR THRIPS (Taeniothrips inconsequens Uzel)

New York

C. C. Wagoner (April 12): Adults were first found on April 10 in Ulster County. They have been increasing slowly since. (April 19): Pear thrips damage does not appear to be so severe as last year.

PEAR PSYLLA (Fsylla pyricola Foerst.)

New York

C. R. Crosby and assistants: The pear psylla appears to be more numerous than it has been any season during the past four years in Onondaga County. Very few eggs had hatched in this county up to April 19. In Niagara County egg laying was well under way on April 14. In Albany and Orleans Counties egg laying was started about April 12 and in Ulster and Dutchess Counties the first egg laying was observed on April 6. The pest is reported as being moderately abundant throughout the fruit-growing sections of the State.

PEACH

PEACH BORER (Aegeria exitiosa Say)

Georgia

O. I. Snapp (April 17): About 500,000 pounds of paradichlorobenzene were used in the Georgia Peach Belt last fall. The results have been uniformly good, and grovers are greatly pleased with the conbrol. It can not be used with safety on one, two, and three year old trees in this latitude.

LESSER PEACH-TREE BORER (Aegeria pictipes G. & R.)

Georgia O. I. Snapp (April 17): This pest is unusually abundant in southern Georgia or chards this spring.

PLUM CURCULIC (Conotrachelus nenuphar Hbst.)

Connecticut J. L. Rogers (April 23): At Mt. Carmel they are evidently just coming out of hibernation.

Georgia

O. I. Snapp (April 17): Irrespective of the abnormally cold winter the curculio is appearing in numbers, and apparently the mortality during hibernation has not been higher than usual. Aduly curculies have been appearing in numbers since March 29. One hundred and seventy-five beetles were collected on 107 trees this morning. The largest number collected on any morning during the 1923 season on these same trees was 138. Hibernation records at the insectary show that to date Bermuda grass has carried through over 50 per cent of the adult curculios. The first egg was noticed in the field on April 9. Many eggs have been found daily since that date.

TWELVE-SPOTTED CUCUMBER BEETLE (Diabrotica 12-punctata Oliv.)

Georgia 0. I. Snapp (April 17: At Fort Valley they are present as usual, and doing some damage in peach orchards by devouring the small peach before the shedding of the calyces.

Mississippi J. M. Langston (April 12): At Starkville damage is slight.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Georgia

O. I. Snapp (April 17): The San Jose scale has been pretty generally Hilled out by low temperatures during the past winter and by more careful spraying. A large amount of lubricating-oil emulsion was used in the Georgia Peach Belt during the past winter. This was both of the heated and cold-stirred emulsions. Usually this scale breeds all winter in this latitude, but on account of the above conditions no crawlers have been observed since the occurrence of the low temperatures. No injury to peach trees has resulted to date from the use of the lubricating-oil emulsions.

GRASSHOPPERS (Acridiidae)

Georgia 0. I. Snapp (April 15): Grasshoppers are troublesome in some orchards at Fort Valley, often devouring the whole of a small green peach.

RASPBERRY

STRIPED TREE CRICKET (Oecanthus nigricornis Walk.)

New York

K. E: Paine (April 12): One planting in Chattauqua County is badly infested with eggs,

C. R. Crosby (April 16): Infested raspberry canes were received from Katonah.

GRAPE

KATYDIDS

Indiana

J. J. Davis (April 23): An unusual number of katydid eggs have been sent this spring for identification. Most of them were collected on grape and apple.

GRAPE LEAFHOPPER (Erythroneura comes Say)

New York

K. E. Paine (April 12): In Chautauqua County adults are abundant under dead leaves and grass.

GRAPE MEALY BUG (Pseudococcus maritimas Ehrh.)

Michigan

R. H. Pettit (April 26): I have just returned from a trip to our grape belt; at Lawton I found Pseudococcus maritimas, which may perhaps well be called the grape mealy bug, in enormous numbers in certain vineyards. They come out when the Weather turns a little warm and retire under the loose bark when it chills. It is really a very serious infestation and apparently covers quite a bit of country, not being confined to one or two vineyards alone. The young mealy bugs, in the first stage, literally swarm over the old stocks and I will say that last year I observed the same insect in the same vineyard where they messed up the vine badly, coating them with honey-dew and webbing up the bunches of grapes. They also seem to cause many grapes to fall and made very many of them unsightly. Preliminary experiments using nicotine, strong lime-sulphur and Sunoco spraying oil were made. Cur grapes are beginning to show a slight swelling of the buds but the buds have not yet burst. An examination of the roots and tops of Legurinous cover crops such as clover and vetch failed to reveal any of the mealy bugs.

CURRANT

CURRANT APHID (Myzus ribis L.)

Delaware

C. O. Houghton (April 23): The first examples of this species are beginning to appear on current leaves at Newark.

Utah

G. T. Knowlton (April 4): Eggs of Myzus ribis L. are very numerous on the red currant in the northern part of this State. Last year they did serious damage in most places where this currant is raised in Utah.

IMPORTED CURRANT BORER (Synanthedon tipuliformis L.)

Delaware

C. O. Houghton (April): Examination of current bushes at Newark this spring indicates that less injury was caused in this vicinity by this species last year than is usual.

GCOSEBERRY

GOOSEBERRY BUD MIDGE (Rhopalomyia grossulariae Felt)

Delaware

C. O. Houghton (April 1): Cuttings from bushes have recently been brought in which display the characteristic "witchesbrooms" formed by this species as figured by Houser and Felt, and I have determined them as indicated above. It is the first time that this injury has come to my attention.

PECAN

AMBROSIA BEETLES

Mississippi

R. W. Harned (April 21): Numerous complaints have been received from different sections of the State in regard to ambrosia beetles in pecan trees. Last winter was probably more severe on pecan and other orchard trees than any of the preceding five or six winters. The ambrosia beetles are probably attacking the trees that have been injured by the cold weather.

HICKORY APHID (Longistigma caryae Harris?)

Georgia

O. I. Snapp (April 11): Aphids are very abundant on a 5-year old pecan tree. They are numerous enough to have devitalized the trees had the grower not used nicotine sulphate.

CITRUS

COWPEA CURCULIO (Chalcodermus aeneus Boh.)

Florida

W. W. Yothers (April 17): It is very seldom that the cowpea weevils become injurious to citrus trees. On March 25, 1922, however, at Eagle Lake they were present in great abundance on new shoots on citrus trees and were causing considerable damage. This year on April 16 they were again present in considerable numbers on the tender foliage on recently set trees. In fact, they had been present on these trees for a considerable length of time. The new shoots were attacked by clusters of these insects and the damage in preventing growth was considerable. This field had been planted in cowpeas in

1923 and diskedunder in the fall. The weevils had been picked once and were present on the day of my visit in large numbers. They had eaten the young shoots so continuously that the upper foot of the recently set trees had been killed and only the more vigorously growing shoots near the base survived. It is very doubtful, however, if any tree was really killed by this pest.

ORANGE

AN APHID (species undetermined)

Florida

A. H. Beyer and W. W. Yothers (March 26-April 12): An aphid, the exact identity of which has not yet been postively determined, is present in enormous numbers on orange in portions of southern Florida and is doing very important damage. (Further information concerning this outbreak can doubtless be furnished in the next issue of the bulletin.)

TRUCK-CROP INSECTS

MISCELL ANFOUS FFFDFRS

ILBRICATED SMOUT-EFETLE (Maicaerus imbricatus Say)

Mississippi

R. W. Harned (April 21): Several reports have been received regarding the damage caused by the implicated shout-beetle in George County, Miss. The correspondents state that these insects are attacking all kinds of green foliage, but mention especially turnips and sand pears.

POTATO-TURFR MOTH (Phthorimaea operculella Zell.)

California

Weekly News Letter, State of California, Dept. of Agriculture, Volume 6, No. 7 (April 5): A committee of Colma Potato Growers, April 3, will visit Sacramento for the purpose of checking the possibility of the application of this method (fumigation) to potatoes going to the northwest. The potato growers in the Colma district estimate that their losses last year were in the neighborhood of \$40,000, due to the markets of the Northwest being closedate them, because of the presence of the tuber moth.

AUSTRALIAN TOMATO WEEVIL (Designtha nociva Lea)

Alabama

J. E. Graf (April 25): I have just received a letter from Mr. Otto Brown, Chief of the Division of Plant Industry, State of Ala., in which he communicates report of the finding of the Australian tomato weevil in two places 10 miles apart just outside of the city limits of Mobile.

Mississippi

R. W. Harned (April 21): Mr. H. P. Loding of Mobils, Ala., has written us that a specimen of the so-called Australian tomato weevil has been found at Orchard, Mobile County, Ala. This specimen was found in the pupa stage under a log by Dr. Van Aller, and the adult emerged on April 16. This is the only record we have of this insect occurring in Alabama. So far it has been found in only five counties in Mississippi - Hancock, Harrison, Jackson, Pearl River, and Stone.

POT ATO

POTATO APHID (Macrosichum solanifolii Ashm.)

Virginia

H. Spencer (April 25): The pink and green aphid is appearing early this year. There is just a sprinkling of them now.

COLORAGO POTATO EFFTLE (Leptinotarsa decerlineata Say)

Mississippi

F. F. McGenee (April 15): Only a few specimens have been found at Holly Springs to date.

J. E. McEvilly (April 24): Less than 1 per cent of the plants were infested with this insect. Colorado potato beetles under control with arsenate of lead, at McComb.

Alfred Lutken (April 26): Very few adults seen. Larvae now appearing in large numbers at Picayune.

CABBAGE

I PORTED CARBAGE VOR (Pontia ranae L.)

Delaware C. O. Houghton (April 17): Saw first examples of this species on wing at Newark; this is considerably later than usual.

CABBAGE APHID (Brevicoryne brassicae L.)

Virginia F. Spencer (April 11): This insect is appearing in considerable numbers in the eastern Virginia trucking districts. Tany growers are starting to dust with nicotine dusts.

STRAWEERRY

1 STRAVBERRY ROOT WEEVIL (Brachyrhinus rugifrons L.)

Washington D. C. Mote (April 8): Correspondents reported strawberry root weevil increasing in abundance at Vancouver.

RED SPIDER (Tetranyonus sp. ?)

New York L. C. Tyler (April 19): This insect is reported from Herstead as present in small numbers.

BEANS

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

Placara N. F. Howard (April 16): Hibernation studies in the field near Birmingham have resulted in finding more ceetles per unit of area than during the previous two winters; also, larger colonies and more colonies were found. While it is too early to give percentages of survival in the hibernation cages, it is expected that the survival will be somewhat lower than the average of the two preceding seasons. The severe winter caused the beetles to remain acsolutely dormant during the greater part of the winter, and activity did not start until April 5.

PEAS

PEA APHID (Illinoia pisi Kalt.)

California

R. E. Campbell (April 8): Counts of 10 feet of row showed an average of from 1 to 40 aphids, with an average for the entire 1500 acres of 5 per 10 feet of row, in the Santa Clara Valley. Coccinellids and a few syrphids were observed, but there was not much activity as yet.

LETTUCE

A MYRIOPOD (Probably Scolopendrella sp.)

Indiana

J. J. Davis (April 23): A species of a myriopod, probably Scolopendrella sp., was first reported damaging lettuce in green-houses by eating roots, at Indianapolis, January 8. Considerable damage was reported in this greenhouse, and reports from other sections of the State indicate similar injury in other localities.

A SCAVENCER BEETLE (Trox suberosus Fac.)

Indiana

H. F. Dietz (April 22): A scavenger beetle has been sent into this office for identification from Greencasthe where it occurred in large numbers in the soil of lettuce houses. The lettuce grower informs us that the adult beetles also feed on the leaves of lettuce at night. Poisoned bran bait is being thied as a control.

RHUBARB

A LEAF BEETLE (Gastroidea aenea Melsh.)

Nebraska

M. H. Swenk (April 21): From Morrill County comes a report that during the third week in April rhubarb plants in a garden had the new leaves covered with a leaf-beetle, which threatened to do serious injury to the rhubarb leaves.

BEETS

BEET-ROOT APKID (Pemphigus betae Doane)

Utah

G. F. Knowlton (April 4): Pemphigus betae numerous, wintering over in certain beet fields where they were bad last year in Cache County.

SOUTHERN FIELD-CROP INSECTS

COTTON

BOLL WEEVIL (Anthonomus grandis Boh.)

Texas

T. C. Baroer (April 17): The boll weevil has oeen reported from the Lower Rio Grande Valley as having been found in a number of fields during the past three or four days in the localities of San Benito, Rio Hondo, and Los Indios. Found the first adults I have seen in the Brownsville section today. Cotton is very backward, being nearly a month late due to a cold and unfavorable spring.

TOBACCO

TOBACCO FLEA-BEETLE (Epitrix parvula Fab.)

Florida

F. S. Chamberlin (April 15): The tobacco flea-beetle is present this spring in about the usual numbers in spite of the previous severe winter, at Quincy.

A CUT"OR' (Feltia annexa Treit.)

Florida

F. S. Chamberlin (April 15): This cutworm is fairly numerous on tobacco, cabbage, and various truck crops, at Quincy.

TOBACCO BUD OR! (Heliothis virescens Fab.)

Florida

F. S. Chamberlin (April 22): The tobacco budworm is appearing in the usual numbers. All types of tobacco are attacked by this insect.

RICE

RICE STALK-BORER (Chilo plejadollus Zinck.)

Louisiana

J. W. Ingram (April 21): After examinations of fields in several different localities in the rice section of southwestern Louisiana the mortality of overwintering larvae in rice stubble has been found to be about 63 per cent.

SUGAR-CAME BORTR (Diatraea saccharalis Fab.)

Louisiana

J. W. Ingram (April 21): After examinations of fields in several different localities in the rice section of southwestern Louisiana the mortality of overwintering larvae in rice stubble has been found to be about 63 per cent. Ninety-four per cent of the live borers found were <u>D. saccharalis</u> Fab.

FOREST AND SHADE-TREE INSECTS

MISCFLLANEOUS FEEDERS

TER ITES (Reticulitemes spp.)

GENERAL STATEMENT T. E. Synder (July 1,1923 - April 8,1924): During this period reports of termite damage to woodwork and contents of buildings ranged from Florida to New Hampshire and westward to Texas and Nebraska. Four reports were received from California.

Indiana

H. F. Dietz (April 22): Termites recorded at Indianapolis during the past month have seen Reticulitermes virginious Banks. The swarming as recorded for three different dwelling houses in Indianapolis was on April 12.

J. J. Davis (April 23): Termites have been unusually abundant this year. The first record was on February 26. Most of the records of injury and swarming of termites have been received during the last two weeks. As might be expected, the infestations are unusually common in the southern half of the State. Logansport being the farthest-north record of injury reported this spring.

A POVIDER-POST BEETLE (Lyctus sp.)

Indiana

J. J. Davis (April 23): Powder-post beetles were sent in from Columbus on March 3, where they are reported damaging acacia veneer wood used in the manufacture of furniture.

JUNIPER SCALE (Diaspis carueli Targ.)

Indiana

H. F. Dietz (April 22): The juniper scale was sent in to this office from Richmond on April 8. The plant infested was Irish juniper, Juniperus communis var. hibernica, sent into Indiana from a nursery near Philadelphia. This is the third record of this insect in Indiana, the other localities being Funcie and Indianapolis.

HEMLOCK WEBUOFM (Gelechia aoietisella Pack.)

Massachusetts A. I. Bourne (April 24): Evergreen hedges in this particular region (Amherst) have been brought to our attention because of the fact that there is a very general and quite heavy infestation by the hemlock webworm. The characteristic work of this species on the leaves during this season before growth starts is very conspicuous.

BAGYORM (Thyridopteryx ephemeraeformis Haw.)

Missouri

L. Haseman (April 23): This pest was unusually troublesome in certain parts of Missouri last summer, and the cv ryintering bags have attracted much attention during the past month, particularly in the West-central part of the State.

FALL CANKERYORM (Alsophila pometaria Harris)

New York

G. M. Codding (April): Moths were noticed in large numbers up to December 20, 1923. Egg masses are common on shade and fruit trees, which apparently means much damage this spring.

Ohio.

H. A. Gossard (March 22): Mr. C. F. Irish, a landscape gardoner of Cleveland, reported to us that the cankerworm moths were seen coming up about the first week in March. No field work has yet commenced.

BIRCH

BIRCH LEAF-SKELETONIZER (Bucculatrix canadensisella Charb.)

Connecticut R. B. Friend (April 23): The scarcity of coccons containing live pupae compared with the number of old and empty cocoons would seem to indicate fewer of these insects this coming year, although there is much local variation.

BOXELDER

BOXELDER PLANT-BUG (Leptocoris trivittatus Say)

South Dakota H. S. Severin (April 2): This bug passed the winter successfully and is now laying eggs. It is one of the earliest of insects with us.

ELI'

ELM SCURFY SCALE (Chionaspis an ericana Johns.)

Ohic H. A. Gossard (March 22): The elm scurfy scale on elm was received from Wellington January 30.

ELM BORER (Saperda tridentata Oliv.)

Neoraska M. H. Swenk (April 21): During April the elm borer was reported as having seriously injured or killed elm trees in our southeastern counties.

LARCH

LARCH CASE-BEARER (Coleophora laricella Eusbn.)

Connecticut V. E. Britton (April 24): Cocoons or winter cases were sent us Harch 15 by S. W. Eddy, who observed that chickadees were feeding upon them.

LOCUST

LOCUST BORER (Cyllene robiniae Forst.)

New York G. M. Codding (March): Locust trees throughout Westchester County are oadly infested. Many trees have been killed.

OFK

A MAY-PEETLE (Lachnosterna sp.)

Louisiana G. H. Bradley (April 5): These insects appeared abundantly around a flowering cak tree and were creating considerable commotion about 8 p. m.

POPI.AR

A MAY-BEETLE (Lachnosterna arcuata Smith)

Louisiana

G. h. Bradley (April 14): This insect has defoliated four young, about five-year-old, trees on a lawn at Found.

APHIDIDAE

(Meothomasia populicola Thos.)

Louisiana

G. H. Bradley (May 14): Reported from Mound as abundant on poplar trees.

MAPLE

MAPLE BORER (Synanthedon acerni Clem.)

Ohio

E. W. Mendenhall (April 28): Maple borers are doing considerable damage to the maple trees in the residential district of south Dayton.

INSECTS ATTACKING GREENHOUSE

AND ORMANENTAL PLANTS

GREENHOUSE WHITE FLY (Trialeurodes vanorariorum Westw.)

New York

C. R. Crosby (March 21): An infested oxalis leaf was received from Earlville.

VARIEGATED CUTVORM (Peridroma margaritosa Haw.)

Indiana

H. F. Dietz (April 22): The variegated cutworm was recorded as a serious pest on greenhouse smilax at Richmond and at Greencastle. The greenhouse carnations were also injured by these caterpillars.

GREEN JUNF BEETLE (Cotinis nitida L.)

Indiana

J. J. Davis (April 23): On April 15 damage to a lawn by the green June beetle grub was reported from Marysville, Clark County, which is in the southern part of the State, not far from Louisville, Ky.

IRIS

IRIS ROOT-BORER (Macronoctua onusta Grote)

Indiana

H. F. Dietz (April 22): Two parasites of the iris root-borer have been identified by specialists in the United States National, Museum as Apanteles militaris Walsh and Amblyteles jucundus Brulle, the former being identified by Mr. Cushman. This apparently is the first record of any parasites of the iris root-borer, which has been a very serious pest on ornamental iris plantings in Indiana.

ROSE

A MAY-BEETLE (Lachnosterna hirticula Knoch)

Mississippi Alfred Lutken (March 29): The first beetles were observed in flight just at dusk, hovering about rose and fig at Laytown.

ROSE LEAT-TYFR (Cacoecia rosaceara Harr.)

Illinois C. C. Corpton: The rose leaf-tyer is becoming numerous and troublesome to rose growers in the vicinity of Chicago.

AN ENEMY OF APHIDS

Louisiana G. H. Bradley (April 5): Individuals of the spotted lady-beetle (Megilla maculata DeG.) were noted to have left their hibernating quarters in an old oak tree and were eagerly searching rose bushes in the vicinity of Mound.

INSECTS AFFECTING MAN

AND DOMESTIC ANIMALS

MAN

OX WARBLE (Hypoderma lineatum DeVill.)

Idaho

R. A. Muttkowski (April 19): Infestation with Hypoderma lineatum; The case was a boy of eight at Orofino, Idaho. The larva of this bot emerged from a swelling on the boy's head, a little behind the ear and above the neck, leaving the characteristic puncture or hole in the middle of the swelling. The case was reported to me by Dr. Fairly of Orofino, who sent me the bot together with the case history. This was typical in every respect. The boy was brought to the physician's notice in late January, when he complained of axillary pains, stiffness, low fevers, and "shooting pains." The doctor found only a slight swelling at the time, located near the clavicle. This swelling roved upward and around the neck to the back of the head where it seemed to halt and grow larger. The physician suspected a tumor and was preparing to operate in a few days, when the mother noticed the appearance of a perforation in the middle of the swelling, followed by the emergence of the larva. This was in February, about the 14th.

IXODIDAE

Idaho

R. A. Muttkowski (April 19): Mummification of a wood tick; one of my students reported to me about three weeks ago that she had been bothered with a peculiar hardening of tissue in her right heel, as though a lump of some sort had formed. There was no definite shape, to the lump, except that a small papilla had formed externally with a central opening. The lump had caused

no pain at any time, but it irritated her when walking, as it felt as if she had a foreign body in her shoe. A physician opened the "papilla" a month ago, probing down the "canal" and finally took from it an adult wood tick (the spotted fever type), which was quite hard and completely rummified. With the cause of "the lump" thus removed, the physician deemed further operation unnecessary. A week ago the same student told me that the lump was rapidly disappearing and scarcely noticeable when she walked. The time of infection is of interest. The girl could not give me an exact date, but she felt that the parasite had attached itself during April or May last year (1923) since at that time she had gone on frequent picnics to the woods around Moscow. Since then she had not been into the woods. Indeed, she had first noticed the formation of a small lump late last summer, but had not considered it of sufficient importance to consult a physi-Evidently the tick had fastened to her heel and bored its way into the epidermis. Since the heel is much in use, there was a protective hypertrophy of epidermal and subcutaneous tissue to cut off or surround the parasite, thus causing "a lump". Death of the parasite, I imagine, care from the sweat and lack of oxygen. After that the parasite was passive, but the tissue still continued its attempt to isolate the foreign body. The interesting feature of the case is the unusual point of attack; the remainder is merely a repetition of the usual defensive methods of the body against foreign bodies. Students come to me often enough to tell me of wood-tick bites. But these occur most frequently below the knee, in the groin, in the axilla, but especially just below the margin of the shoulder-blade. I have also taken a tick or two from the heads of a boy and a girl.

CATTLE

CANYON HORSE-FLY (Tabanus rubescens Bellardi)

Texas

D. C. Parman (April 21): One specimen of the canyon horse-fly has been observed at the laboratory on April 16. This is a very early date for appearance and is the earliest on record for appearance at the laboratory. None were observed in the canyons on April 19.

SCREWWORM (Chrysomya macellaria Fab.)

Texas

D. C. Parman (April 21): The screwworm fly is increasing in numbers and the winter blow-fly is diminishing rapidly, about 50-50 on the first of this month and is about 85 per cent screwworm flies and 15 per cent <u>Phormia regina</u> on April 21. Several cases of worms have appeared on ranches and it will probably be a year of many cases of worms as the adults have appeared in greater numbers at an earlier date than normal.

HORN FLY (Haematobia irritans L.)

Texas

D. C. Parman (April 21): The adults of the horn fly have appeared in good numbers (as many as 1,000) on some cattle in all herds on April 10. There has been some increase to date except in a strip of territory in the hailstorm area to the south, where very few adults are observed at present.

POULTRY

CHICKEN MITE (Dermanyssus gallinae Redi)

Texas

D. C. Parman (April 21): It is worthy of note that the chicken mite has not been observed at Uvalde this season and it has not been possible to maintain an infestation for experimental work.

FOWL TICK (Argas miniatus Koch)

Texas

D. C. Parman (April 21): The fowl tick has appeared in good numbers where they have not been controlled, and some losses have occurred.

DOGS

BITING DOG LOUSE (Trichodectes latus Nitzsch)

Connecticut

W. E. Britton (April 11): The first definite record which I have received from this State is from Pomfret, where this pest was attacking a collie.

INSECTS INFESTING HOUSES AND PREMISES

CARPENTER ANT (Camponotus herculeanus pennsylvanicus DeG.)

Mississippi

M. R. Smith (April 10): Mr. R. P. Colmer recently sent to this office for determination specimens of the carpenter ant, which he stated were infesting the house of a lady at Moss Point. The ants were particularly abundant on preserves and cold ham on which they were feeding.

EUROPEAN EARWIG (Forficula auricularia L.)

Oregon

B. B. Fulton (April 4): Most of the eggs had hatched in warm situations at Albany. Pear trees are just beginning to blossom at this time and may serve as an indicator.

AN ANT (Gremastogaster laevius cula Mayr)

Mississippi

M. R. Smith (April 3): This species of ant was found infesting a house on the campus at the A. & M. College. The housekeeper states that they are worse on warm days and have been noticed coming in on the pillars from the ground. The ant is fond of greasy foods or sweets. C. laeviuscula is not a common house pest in this locality.

